

## 2002 ORIGIN-DESTINATION SURVEY AROUND BARRON

An origin-destination survey was conducted on the principal highway routes near the corporate limits of the City of Barron including USH 8 east and west as well as STH 25 north and south of the community. The primary purpose of the survey was to determine the existing travel patterns on these major roadways leading to Barron and reporting on the trips passing completely through the area as well as the trips going to or from the city that were collected at each interview location.

The accompanying map illustrates the internal zone configuration of six zones representing dissimilar land use and/or commercial activity. For this particular survey zone five on the map represents the city's central business district with other distinct or characteristically unique areas of the city represented from zone to zone. Also shown on the map are the four interview sites at each of the highway routes passing through the area. Traffic was surveyed outbound for eight consecutive hours beginning at 10:00 a.m. and ending at 6:00 p.m. to capture at least one of the daily peak (afternoon) traffic periods throughout mid-July of 2002. The complete survey was then later processed and factored up to represent average daily traffic (ADT) for a 24-hour period.

All interviews were conducted in a uniform procedure that incorporated stopping vehicles as they approach the survey station and asking motorists predetermined questions about their trip. Essential questions that were asked included origin of the trip being made, destination of the trip, the type of vehicle used and primary purpose of the trip as well as the number of occupants in each vehicle. Following are the 24-hour trip results for each of the four survey locations. Local represents any trip within the zonal network while Through represents trips passing completely through the study area. The slash mark separates heavy trucks from all vehicles.

### TOTAL TRIPS

Station Location (4 Origin Destination Sites)		Total Trips (All Vehicles/Heavy Trucks)	Trip % (All Vehicles/Heavy Trucks)
USH 8 East	Local	6056/411	60.2%/33.8%
	Through	4011/ 805	39.8%/66.2%
	Total	10,067/1216	100%/100%
STH 25 North	Local	1978/72	72.7%/34.1%
	Through	742/139	27.3%/65.9%
	Total	2720/211	100%/100%
USH 8 West	Local	3640/365	39.5%/27.6%
	Through	5569/956	60.5%/72.4%
	Total	9209/1321	100%/100%
STH 25 South	Local	2214/170	60.8%/52.1%
	Through	1430/156	39.2%/47.9%
	Total	3644/326	100%/100%

Following are the Through trips by each of the four origin-destination stations. The recording station is in the left hand column and the through trip routes are in the remaining columns. Once again the slash mark separates all vehicles from heavy trucks.

### THROUGH TRIPS

	USH 8 E	STH 25 N	USH 8 W	STH 25 S	Total
USH 8 East	-----	201/31	3298/701	512/73	4011/805
STH 25 North	71/23	-----	364/74	307/42	742/139
USH 8 West	4513/748	895/191	-----	161/17	5569/956
STH 25 South	839/57	273/49	318/50	-----	1430/156
Total	5423/828	1369/271	3980/825	980/132	11,752/2056

The next table looks at the number of Local trips or those trips with an origin or destination within one of the six subdivided zones found within the City of Barron. Again the slash mark separates all vehicles from heavy trucks.

### LOCAL TRIPS

Station Location	Zones						Totals
	#1	#2	#3	#4	#5	#6	
USH 8 East	477/36	802/85	1004/146	1803/128	1612/16	358	6056/411
STH 25 North	299/21	236/15	390/36	376	549	128	1978/72
USH 8 West	496/37	407/77	523/108	821/55	1014/17	379/71	3640/365
STH 25 South	301	103/24	429/82	529/27	636	216/37	2214/170
<b>Total</b>	<b>1573/94</b>	<b>1548/201</b>	<b>2346/372</b>	<b>3529/210</b>	<b>3811/33</b>	<b>1081/108</b>	<b>13,888/1018</b>

### BYPASS TRIPS

The Through and Local Trip tables for Barron indicate that if a southern USH 8 bypass facility were in place today, an estimate of 4,582 vehicles or approximately 45% of the total trips from USH 8 east and nearly 20% of the total trips from STH 25 would utilize the southeast segment between STH 25 south and USH 8 east. Included in this figure are 790 heavy trucks or 60% of the total truck traffic on USH 8 east and 20% of the total truck traffic on STH 25 south. These figures are attained as a result of averaging the through trips between USH 8 east and west (3,906/725) and also averaging the through trips between STH 25 south and USH 8 east (676/65).

The amount of trips on the southwest segment would be 4,146 vehicles and includes the same USH 8 east and west average (3,906/725) as well as the average trips between STH 25 south and USH 8 west (240/34). Included in this figure are 759 heavy trucks or 4% less than the USH 8 southeast segment. Based upon current (2000) AADT volumes along USH 8 in the City of Barron, the amount of vehicles removed from the existing highway through Barron would fall within the range of a 33 to 37% reduction in overall traffic volumes in the city.

A similar situation exists with a northern bypass of Barron on USH 8 as the survey indicates 4,536 vehicles on the northwest segment between USH 8 west and STH 25 north. Included are 858 heavy trucks or nearly 9% more than the southeast segment of the bypass. The average number of through trips between USH 8 east and west remains the same with 3,906/725 while the average number of trips between USH 8 west and STH 25 north is 630/133 for a total of 4,536/858 trips assigned to this segment of the bypass. The northeastern segment of a USH 8 bypass has nearly 11% less traffic as the northwestern segment including the USH 8 east and west figure of 3,906/725 and 136/27 trips between USH 8 east and STH 25 north for a total of 4,042/752 vehicles. Once again based upon current (2000) AADT volumes along USH 8 in Barron, the amount of vehicles removed from the city's central business district is estimated at 32 to 36% or nearly the identical range as the southern bypass.

### VEHICLE TYPE, OCCUPANCY, AND TRIP PURPOSE

Also collected during the survey were the vehicle classification type and trip purpose percentages as well as the vehicle occupancy ratio.

Vehicle Type	USH 8 E	STH 25 N	USH 8 W	STH 25 S
<b>Autos</b>	<b>48.9%</b>	<b>50.5%</b>	<b>47.5%</b>	<b>57.7%</b>
<b>Light Trucks (pick-ups, vans)</b>	<b>39.0%</b>	<b>41.8%</b>	<b>38.2%</b>	<b>33.4%</b>
<b>Heavy Trucks (delivery, semi-trailers)</b>	<b>12.1%</b>	<b>7.7%</b>	<b>14.3%</b>	<b>8.9%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Purpose Type	USH 8 E	STH 25 N	USH 8 W	STH 25 S
<b>Home</b>	<b>46.1%</b>	<b>50.4%</b>	<b>50.2%</b>	<b>68.0%</b>
<b>Work</b>	<b>18.5%</b>	<b>16.5%</b>	<b>19.7%</b>	<b>12.6%</b>
<b>Recreation</b>	<b>6.2%</b>	<b>5.4%</b>	<b>11.4%</b>	<b>3.9%</b>
<b>Other</b>	<b>29.2%</b>	<b>27.7%</b>	<b>18.7%</b>	<b>15.5%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Vehicle Occupancy Ratio	USH 8 E	STH 25 N	USH 8 W	STH 25 S
<b>Persons per vehicle</b>	<b>1.47</b>	<b>1.45</b>	<b>1.61</b>	<b>1.52</b>